REMARKS

Claims 1-16 are pending in the present application. Claims 1-16 are rejected. Claims 1, 13, 15 and 16 are herein amended.

Objections to the Claims

The Examiner states that claims 1 and 16 are objected to because of the following informalities: claims 1 and 16 contains two transitional elements which are "comprising" and "further comprising", it is unclear where Applicant's preamble ends and the limitations of the claims begin.

Applicants herein suitably amend claims 1 and 16 to clarify the invention. Applicants submit that this clarification overcomes the objections.

Claim Rejections under 35 U.S.C. §102(b)

Claims 1-16 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,986,301 to Fukushima et al. The Examiner states that Fukushima et al. (FIG. 21B) discloses an intermediate layer of $W_{1-x}Re_xO_{3-\delta}$ (242a) between a bottom electrode of a base metal (242b) and a BSTO film (243).

Applicants herein amend the claims. Subsequently, Applicants respectfully disagree with the rejection, because not all of the claimed limitations are taught or suggested by the cited reference.

Applicants note that the present invention is characterized in that an intermediate layer of perovskite crystal structure contains Ti, and a ferroelectric film contains Ti. A Ti atom positions a B-site of perovskite crystal structure of the intermediate layer.

Where the ferroelectric film is a lead-based oxide ferroelectric film, crystal structure of the ferroelectric film is perovskite crystal structure. The Ti atom existing on a surface of the intermediate layer positions a B-site of perovskite crystal structure of the ferroelectric film. That is, the Ti atom is shared between the intermediate layer and the ferroelectric film. Therefore, in the present invention, it is possible to obtain high affinity between the intermediate layer and the ferroelectric film. Accordingly, it is possible to form the ferroelectric film having good crystallization, even though the lattice constant of the ferroelectric film is different from a lattice constant of the intermediate layer.

In a case that the ferroelectric film is a bismuth layer structure ferroelectric film ($(AO)_2(B_{x-1}C_xO3_{x+1})$ film (A is at least any element of Ti, Pb, Bi and rare earth element; B is at least any element of Bi, Pb, Ca, Sr and Ba; C is Ti; and Y is any of 2, 3, 4 and 5)), the ferroelectric film has layer structure of perovskite structure and ---. The Ti atom existing on the surface of the intermediate layer positions a B-site of the perovskite structure of the ferroelectric film. That is, the Ti atom is shared between the intermediate layer and the ferroelectric film at an interface of the intermediate layer and the ferroelectric film. Therefore, in the present invention, it is possible to obtain high affinity between the intermediate layer and the ferroelectric film. Accordingly, it is possible to form the ferroelectric film having good crystallization, even though the lattice constant of the ferroelectric film is different from a lattice constant of the intermediate layer.

Fukushima et al. neither teaches nor suggests such a technique of the present invention.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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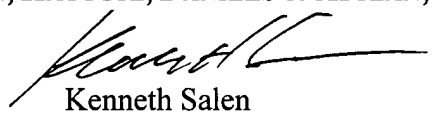

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